



Dart Hawkesbury
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

D4422-3

Job Sheet 168519



Part No: D4422-3

Job Qty: 2 ea

Part Name: Shim



Part Weight: 0 lbs

Status: Scheduled

Priority: Medium

Job Created: 11/16/17

Job Tracking No:

Due Date: 11/24/17

Created By: Sylvie Boucher

Type: Stock

Description:

Note: D4422 REV A IPP revA 11.06.30 new issue EC verified by:JLM

Ship Via:

Bill of Materials

Job Routing

Op No	Operation	Qty	Start Date	Due Date	Standard		Workcenter/Supplier		Sign-off
					Setup hrs	Run Hrs	Workcenter / Supplier	Lead Time	
90	Start up Operation	2 Ea		11/23/17	0.00	0.00	Start Up Waterjet		SC
100	Waterjet	2 pcs		11/23/17	0.00	0.07	Waterjet1		SC
110	QC	2 pcs		11/23/17	0.00	0.00	QC2 Waterjet-4		SC DAS
115	QC	2 pcs		11/23/17	0.00	0.00	QC8-1		38
120	HandFinish	2 pcs		11/24/17	0.00	0.04	HandFinish1		2017-11-20 750
130	QC	2 pcs		11/24/17	0.00	0.00	QC7		38
140	Packaging	2 pcs		11/24/17	0.00	0.00	Packaging3-1	54	9-89
150	QC21-SA	2 Ea		11/24/17	0.00	0.00	QC21		DAS

Part Op Descriptions: **100** - 1-Cut as per Dwg Dwg Rev: A Prog Rev: A 2-Deburr if necessary

21
9-89

NOV 22 2017

Job Allocations

Operation	Component Part	Required	Inventory	Allocated	Std Qty
90-Start up Operation	M6061T6S.063	0	183	0	0

Part Specifications

Specifications could not be found.

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS				
Part No. _____		Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐	
NCR No. _____		Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	
		Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	
		Large Fab ☐	Composite ☐	Supplier ☐		
Date : _____	Step #: _____	QTY Effective : _____			MRB (QS1042) Approval	

Description Work Order Deviation

Completed By

ad hand / Supervisor
approval Verification/ QA Coordinator
Approval

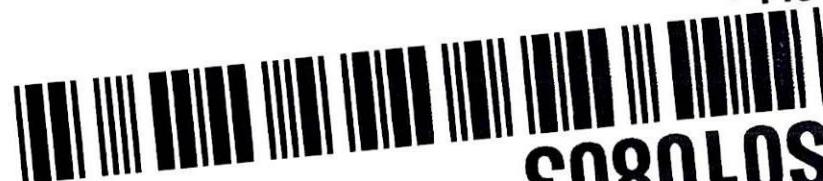
Job No: 168519
Mfg Date: 11/16/17

Start up Operation

D4422-3

Change No:
Operation:
Revision:
PART NO:

Shim



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DART
AEROSPACE
S010803

tioned Wrong
side Dimensions
/Under tolerance
Incorrect
Lost/Missing

Root Cause					
Environment ☐	No Re-verification ☐	Pressure ☐			
Design ☐	Operator ☐	Bending ☐			
Doc/Data ☐	Offset/Setup ☐	Centre No ☐			
Equip/Tooling ☐	Supplier ☐	Cracks ☐			
Handling/Pre ☐	Training ☐	Crimp/Kin ☐			
Material ☐	Use for Testing ☐	Cuffs ☐			
Internal Transport ☐	Poor Information ☐	Crushing ☐			
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐			
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐			
Substation ☐	Process Improvement ☐	Marks/Chatter ☐			
Past Expiry Date ☐	Manufacturing Process ☐				
Misidentified ☐	Past Due ☐	OTHER : _____			

tioned Wrong
side Dimensions
/Under tolerance
Incorrect
Lost/Missing

Part Moved
Drawing
Finish
Misread
Turning Sequence

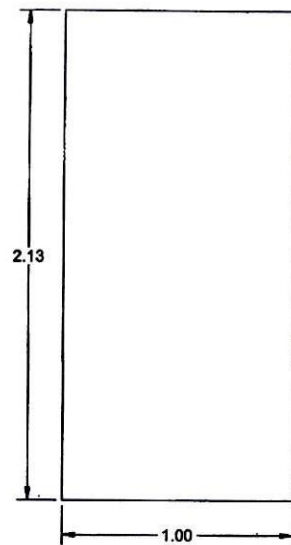
Off-set
Misaligned/off center

Mislabeled
Fit/Function

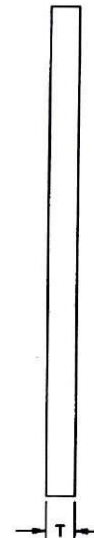
Cut Too Short
Instructions Incomplete/Unclear
Drill Holes

INSPECTION CHECKLIST

Rev	Date	Change	Revised by	Approved
A	14.07.14	New Issue	KJ	



D4422-X SHIM



P/N	T TH THICKNESS
D4422-1	0.125
D4422-3	0.063

NOTES:

1) MATERIAL:

D4422-1: 6061-T6/T62 ALUMINUM SHEET, 0.125 THICK, PER QQ-A-250/11
OR AMS-QQ-A-250/11 OR AMS 4025 OR AMS 4027 OR ASTM B209
REF DART SPEC M6061T6S.125
OR
6061-T6/T651/T6510/T6511/T62, 0.125 X 1.000, PER QQ-A-225/8
OR AMS-QQ-225/8 (OR AMS 4117/4128/4115/4116) OR QQ-A-200/8 (OR AMS 4160)
OR ASTM B211 OR ASTM B221
REF DART SPEC M6061T6B
D4422-3: 6061-T6/T62 ALUMINUM SHEET, 0.063 THICK, PER QQ-A-250/11
OR AMS-QQ-A-250/11 OR AMS 4025 OR AMS 4027 OR ASTM B209
REF DART SPEC M6061T6S.063

2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1

3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED

4) UNITS: INCHES UNLESS OTHERWISE NOTED

5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX

6) IDENTIFICATION: IDENTIFY WITH DART P/N "D4422-X" AND B/N PER QSI 044 6.1

7) WEIGHT: D4422-1 = 0.01 lbs; D4422-3 = 0.01 lbs

SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 163519

DAS NOV 16 2017
30 9-89

RELEASED
2011-07-06

A		NEW ISSUE		MB	11.06.22
REV.		DESCRIPTION		BY	DATE
DESIGN		DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA		REV. A	
DRAWN				SHEET 1 OF 1	
CHECKED		DRAWING NO.		SCALE	
MFG. APPR.		D4422		NTS	
APPROVED		TITLE			
DE APPR.		SHIM			
DATE	11.06.22	COPYRIGHT © 2011 BY DART AEROSPACE LTD THIS DOCUMENT IS PROPRIETARY AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS UNDERSTANDING THAT IT IS NOT TO BE USED FOR ANY PURPOSES OR DISCLOSED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.			

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date :	Step #:	QTY Effective :		MRB (QSI042) Approval	
Description Work Order Deviation			Disposition		
			Completed By		
			Lead hand / Supervisor Approval Verification		
			QC / QA Coordinator Approval		
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐ Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐			FAULT CATEGORY Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐		
OTHER :					